another of said at least two nucleic acid components or to an adaptor molecule that is supplied in addition to the at least two nucleic acid components so as to allow for specific annealing and linkage of all of the nucleic acid components in a predetermined order;

C1 cont.

(b) incubating the nucleic acid components under conditions which allow for specific annealing and linkage of the components to thereby produce the nucleic acid multicomponent construct.

C2

4. **(Amended)** The method of claim 1, wherein each of the nucleic acid components [are] is flanked by [at least one] two single stranded 5' or 3' terminal sequences.

C3

11. **(Amended)** The method of claim 1, wherein at least two of the nucleic acid components are linked indirectly via an adaptor molecule [linking nucleic acid molecule, the linking nucleic acid molecule comprising an adaptor molecule, the adaptor molecule] which provides [having] terminal sequences that are complementary with 5' or 3' terminal sequences [in] of the at least two [separate] nucleic acid components.

Sub D2

C4

31. **(Amended)** A method of producing a vector, comprising:

a) providing at least two nucleic acid components and optionally a linking nucleic acid molecule to be assembled into the construct, each component comprising a double stranded nucleic acid molecule encoding a functionality and having at least one single stranded 5' or 3' terminal sequence, the terminal sequence having sufficient complementarity to either a terminal sequence in a separate nucleic acid component or to a sequence in a linking nucleic acid molecule so as to allow for specific annealing and linkage of the components in a predetermined order, wherein the nucleic acid components encode:

i) an origin of replication

ii) a selectable marker

iii) an insert of interest;

(b) incubating the nucleic acid components under conditions which allow for specific annealing and linkage of the nucleic acid components to thereby produce the functional vector.

Sub D3

C5

39. **(Amended)** A kit for the production of nucleic acid multicomponent constructs, comprising a package containing nucleic acid components, each component comprising a double stranded nucleic acid molecule encoding a functionality and having at least one single stranded 5' or 3' terminal sequence, the terminal sequence having sufficient complementarity to either a terminal sequence in a separate nucleic acid component or to a sequence in a linking nucleic acid molecule so a to allow for specific annealing and linking of the components in a predetermined order.

C

40. **(Amended)** A kit for the production of nucleic acid multicomponent constructs, comprising at least 3 different nucleic acid components ,each encoding a functionality, appropriately phosphorylated for ligation, the kit further comprising a ligase enzyme.

41. **(Amended)** A kit for the production of vectors, comprising nucleic acid components, each component comprising a double stranded nucleic acid molecule encoding a functionality and having at least one single stranded 5' or 3' terminal sequence, the terminal sequence having sufficient complementarity to either a terminal sequence in a separate nucleic acid component or to a sequence in a linking nucleic acid molecule so as to allow for specific annealing and linkage of the components in a predetermined order, wherein the nucleic acid components encode: i) an origin of replication, and ii) a selectable marker.

C5

cont.

42. **(Amended)** A method of linking nucleic acid components in a predetermined order to produce a nucleic acid multicomponent construct, comprising:

(a) providing the nucleic acid components and one or more linking nucleic acid molecules into the construct, each nucleic acid component comprising a double stranded nucleic acid molecule encoding a functionality having at least one single stranded 5' or 3' terminal sequence, the terminal sequence having sufficient complementarity to a sequence in a linking nucleic acid molecule so as to allow for specific annealing of complementary sequences and linkage of the components in a predetermined order;

(b) incubating the nucleic acid components which allow for the specific annealing and linkage of the nucleic acid components to thereby produce the nucleic acid multicomponent construct.

REMARKS

The Examiner has maintained the rejection of the pending claims under 35 U.S.C.. §103(a) as being unpatentable over Watson et al. (1992) (pp. 206-209) in view of Goodchild ((1990) Bioconjugate Chemistry, Vol. 1, pp. 165-187), and "Applicant's admissions and in further view of the Stratagene Catalog" for the reasons laid forth in the office action. Applicants respectfully traverse this rejection, because the cited references fail to provide the necessary teachings and motivation to arrive at the claimed invention for the reasons provided below.

The Examiner's attention is drawn to MPEP § 706.02(j) which sets forth three requirements necessary to establish a *prima facie* case of obviousness. These include: a suggestion or motivation, either in the references themselves of in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference

C